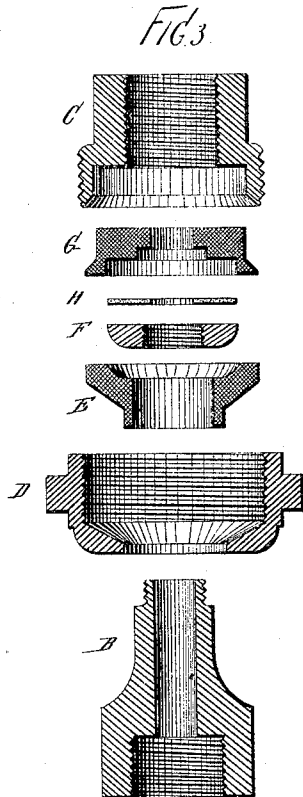
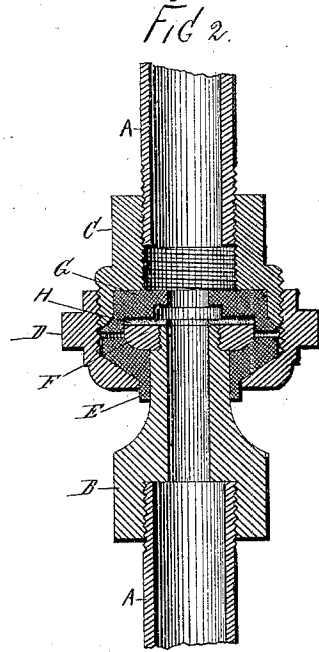
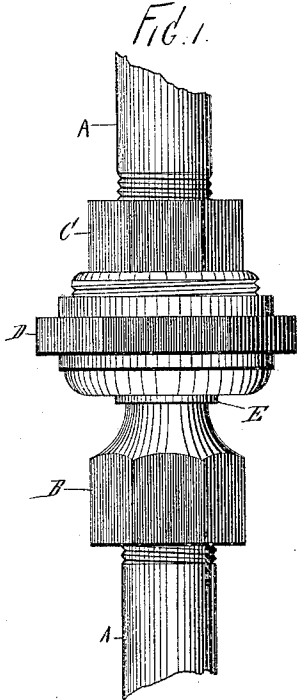


(No Model.)

C. DEAVS.
INSULATING PIPE UNION.

No. 299,206.

Patented May 27, 1884.



Witnesses:
John Buckler,
Henry Lib.

Charles Deavs,
Inventor:
By North Osgood
Attorney.

UNITED STATES PATENT OFFICE.

CHARLES DEAVS, OF NEW YORK, N. Y., ASSIGNOR TO THE ARCHER & PAN-COAST MANUFACTURING COMPANY, OF SAME PLACE.

INSULATING PIPE-UNION.

SPECIFICATION forming part of Letters Patent No. 299,206, dated May 27, 1884.

Application filed October 20, 1883. (No model.)

To all whom it may concern:

Be it known that I, CHARLES DEAVS, of New York city, county of New York, and State of New York, have invented certain new and useful Improvements in Insulating Pipe-
5 Unions, of which the following is a full, clear, and exact description, reference being had to the accompanying drawings, and to the letters of reference marked thereon.

10 My invention has relation to pipe-couplings, especially such as are known as "unions" or "union-joints," and intended for use in uniting the ends of pipes for conveying gas and other fluids and liquids.

15 The object of my said invention is to produce a simple, cheap, and effective union which, in addition to the offices and purposes of pipe-unions as generally employed, shall thoroughly insulate the ends of the pipe-sections against
20 the passage of currents of electricity without in any way detracting from the utility of the device as a coupling or the facility with which it may be applied or detached.

To this end my invention involves certain
25 novel and useful arrangements or combinations of parts, peculiarities of construction, and principles of operation, all of which will be herein first fully described, and then pointed out in the claims.

30 In the accompanying drawings, forming part of this specification, Figure 1 is an elevation, and Fig. 2 an axial section, of a pipe-union constructed and arranged for operation in accordance with my invention and involving the principles thereof. Fig. 3 represents in central vertical section the several parts of the coupling
35 detached from each other.

In all these figures like letters of reference, wherever they occur, indicate corresponding
40 parts.

For many reasons, especially in situations where gas and electricity are employed for illuminating purposes, it is desirable to so prepare the gas-pipes that they will not serve as media
45 for conducting electricity; otherwise there might result "short-circuits," "groundings," and all the attendant disadvantages, as will be readily understood. So, also, in the uses of other pipes, particularly such as are made of
50 iron.

A A represent two sections of pipe which it may be desired to couple together, and yet insulate one from the other against the passage of electricity. To one section I apply the part of the coupling B and to the other the part C, these two parts being arranged to be drawn together by the coupling-nut D, the same as in any ordinary pipe-union. Around the part B is a shell, E, of non-conducting material, the same being arranged within nut D, so as to prevent contact of B therewith at any point. This shell is secured in its place by a ring, F, upon the inner end of B, the ring preferably having a flat upper face and being soldered in place when a perfectly gas-tight joint is desired. A perforated disk, G, of non-conducting material, is placed over the ring F, so as to insulate the upper from the lower part of the coupling; and when the upper part is brought down upon this disk, by turning the coupling-nut D, the upper and lower parts are perfectly insulated from each other, and thus the improved coupling made to insulate the two sections of pipe.

To insure a gas-tight union or to prevent leakage of gas, I sometimes employ a packing-gasket, H, of calf-skin or other suitable material, which will be sufficiently compressed when the coupling is properly assembled, and this is recommended when the non-conducting material is not compressible.

In gas-pipes it is important to avoid liability of movement of the parts within the coupling which form the joint; otherwise leakage might occur, and for this reason I make the ring flat, and the bearing-surface of the disk also flat, so that they may be firmly held together by the nut and the joint thus rendered rigid and secure. In some cases this particular formation may not be necessary; but when the coupling is employed in suspending gas-chandeliers and in other situations wherein the pipes are liable to be vibrated it will generally be found desirable.

The non-conducting material may be such as is now known to the trade as "fiber," or any other of suitable characteristics. Fiber is mentioned because it is not affected by gas, and is especially advantageous for use in connection with gas-conduits.

Having now fully described my invention, what I claim as new, and desire to secure by Letters Patent, is—

1. The herein-described insulating pipe-union composed of the end pieces for receiving the pipe-sections, the coupling-nut for drawing said pieces together, the non-conducting disks or plates interposed between the parts, and the securing-ring, substantially in the manner and for the purposes set forth.

2. In an insulating pipe-union, the coupling-nut, the two end pieces, one of which projects through the nut, the perforated non-conducting disk, and the non-conducting shell interposed between the nut and projecting end piece, said shell being held in place by the ring upon said projecting end piece, these parts being combined and arranged substantially as shown and described.

3. In an insulating pipe-union, the combination, as before set forth, of the end pieces, the coupling-nut, the non-conducting disks, and the holding-ring having a flat bearing-face, arranged substantially as shown and described.

4. In a pipe-union of the character herein set forth, the end pieces, the removable disks, the holding-ring having a flat bearing-surface, the perforated compressible disk, and the coupling-nut, arranged and combined substantially as shown and described.

In testimony that I claim the foregoing I have hereunto set my hand in the presence of two witnesses.

CHARLES DEAVS.

Witnesses:

JOHN BUCKLER,
WORTH OSGOOD.